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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,351	05/30/2001	Wilhelm-Martin Plotz	P01,0137	6281
29177	7590	02/07/2006		
BELL, BOYD & LLOYD, LLC P. O. BOX 1135 CHICAGO, IL 60690-1135			EXAMINER LEUNG, CHRISTINA Y	
			ART UNIT 2633	PAPER NUMBER

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

cc

<b>Office Action Summary</b>	<b>Application No.</b> 09/807,351	<b>Applicant(s)</b> PLOTZ ET AL.	
	<b>Examiner</b> Christina Y. Leung	<b>Art Unit</b> 2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005 and 21 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 8-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-14 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 8 is objected to because of the following informalities:

Claim 8 recites “a garting filter” (sic) in line 15 of the claim. Examiner respectfully notes that the spelling of this phrase should be changed to “a grating filter.” Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sridhar (US 5,778,188 A) in view of Henry et al. (US 6,035,080 A) and Liu et al. (US 6,208,443 B1).

Regarding claims 8, 9, and 10, Sridhar discloses an add-drop apparatus for launching and outputting optical signals (Figure 1), comprising:

a branching coupler 20 having an input, to which incoming signals are fed from the optical ring network, the first coupler having a first output and a second output (column 4, lines 10-19);

a grating filter operating as a bandstop filter apparatus (filters 40), having a first input connected to the first output of the branching coupler, and wherein the grating filter apparatus is tuned to a wavelength of a signal to be launched, so that an incoming optical signal having this

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wavelength is reflected, and incoming signals having all other wavelengths are passed at an output (column 5, lines 1-10);

a second coupler 30, coupled to the output of the bandstop filter apparatus, the second optical coupler further having an add input into which the outgoing signal to be launched is fed against its transmission direction, reflected, and added to the passed signals; and

a further optical filter (such as filter 66A), connected to the second output of the branching coupler, via which an incoming optical signal is output.

Further regarding claims 8 and 10 in particular, Sridhar discloses a grating filter or bandstop filter element 40 and a separate second coupler element 30 performing the functions as discussed above, but Sridhar does not specifically disclose an element wherein the grating filter also operates as the second optical coupler as one element.

However, Henry discloses a grating filter 10 (Figure 1), wherein the grating filter 10 operates as a bandstop filter apparatus 15 and also operates as an optical coupler further having an add input (labeled "ADD" in Figure 1) into which an outgoing signal to be launched is fed against its transmission direction, reflected, and added to passed signals (and output from the port labeled "OUT"; column 2, lines 59-67; column 3, lines 1-12).

Regarding claims 8 and 10, it would have been obvious to a person of ordinary skill in the art to use the grating filter operating as both the bandstop filter and second coupler as taught by Henry et al. in place of the corresponding arrangement in the system disclosed by Sridhar in order to advantageously implement the disclosed elements more compactly as an integrated component.

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Further regarding claims 8, 9, and 10, Sridhar discloses that the add-drop apparatus is used in an optical network (column 1, lines 6-11 and 58-67) but does not specifically disclose a unidirectional optical ring network. However, Liu et al. teach an optical wavelength division multiplexing system related to the one disclosed by Sridhar and including add-drop apparatuses (such as shown in Figure 5). Liu et al. further teach an optical unidirectional ring network (Figure 15A), comprising:

a plurality of network nodes 610, in which data signals are transmitted in wavelength-division multiplex operation via optical fiber and every network node is assigned for its data signal to be emitted an assigned transmission channel with a transmission band used only once; and

at least one network node 610 having an add-drop arrangement/apparatus (column 11, lines 40-65).

Regarding claim 9 in particular, Liu et al. further teach a second further fiber provided for protection purposes (Figure 16 A; column 11, lines 66-67; column 12, lines 1-8).

Regarding claims 8, 9, and 10, it would have been obvious to a person of ordinary skill in the art to provide an optical network having a ring topology such as taught by Liu et al. with the add-drop apparatus described by Sridhar in view of Henry et al. as a way to connect a plurality of users together and allow them to transmit and receive signals. One in the art would have been particularly motivated to use the ring network taught by Liu et al. in order to advantageously provide alternative protection paths if a connection between nodes fails.

Regarding claim 11, Sridhar disclose that the further optical filter (i.e., filter 67A) of the add-drop arrangement is configured to output different transmission channels. Sridhar et al. in

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column 9, lines 52-55, discloses that the “optical selectors,” (such as element 63A, which includes further filter 67A) may comprise tunable filters.

Regarding claim 14 in particular, the combination of Sridhar in view of Henry et al. includes a second optical coupler with a further connection via which the reflected signals are led to an optical link (Figure 1 of Sridhar shows how the added signals are generally reflected and then led to an optical link via a connection between the coupling element and the link and again, Henry et al. teach that added signals are reflected and output to an “OUT” connection of the coupler as shown in Figure 1).

4. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sridhar in view of Henry et al. and Liu et al. as applied to claims 10 and 11, respectively, above, and further in view of Fatehi et al. (US 6,519,064 B1)

Regarding claims 12 and 13, Sridhar in view of Henry et al. and Liu et al. suggest a system as discussed above with regard to claims 10 and 11, including a further optical filter configured to output different transmission channels. Sridhar further discloses that the bandstop filters 40 may also comprise tunable grating filters that can be tuned to other wavelengths (column 5, lines 32-35; column 9, lines 52-55).

Sridhar do not specifically disclose other further filters which can be exchanged or switched over, or exchangeable bandstop filters. However, Fatehi et al. teach an implementation of an adjustable grating filter such as already generally disclosed by Sridhar, wherein grating filters tuned to different wavelengths can be exchanged or switched over (Figures 2 and 4A-C; column 8, lines 20-65). Regarding claims 12 and 13, it would have been obvious to a person of ordinary skill in the art to use the exchangeable filters taught by Fatehi et al. as the further filter

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and second optical coupler (with bandstop filter) in the system described by Sridhar in view of Henry et al. and Liu et al. as a way to implement the adjustable filtering already disclosed by Sridhar. One in the art would have been particularly motivated to use the filters taught by Fatehi et al. in order to allow the system to advantageously change wavelengths in a reconfigurable and scalable way, and without disrupting communications (Fatehi et al., column 2, lines 36-48).

### ***Response to Arguments***

5. Applicants' arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

6. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Y. Leung whose telephone number is 571-272-3023.

The examiner can normally be reached on Monday to Friday, 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christina Y Leung  
Christina Y Leung  
Primary Examiner  
Art Unit 2633